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Serum Phospholipase A2-IIA, hs-CRP, and Lipids in Women With Subclinical Hypothyroidism

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Abstract

Background:

Subclinical hypothyroidism (SCH) is a metabolic disorder characterized by elevated TSH level but normal T4 level. Some previous studies suggest that SCH is associated with inflammation.

Objectives:

The present study aimed to compare lipid serum levels in SCH patients and normal participants, also explore possible association between SCH and the two inflammatory markers hs-CRP and PLA2-IIA.

Patients and Methods:

This study was performed on 77 women aged 20-45 (39 with SCH and 38 in the control group). TSH and T4 levels were measured by electrochemiluminescenceassay. Lipid profiles were analyzed using enzymatic-colorimetric methods. Hs-CRP and PLA2-IIA were determined using the ELISA method. IBM SPSS 19.0 was used for statistical analysis.

Results:

Serum levels of TG, cholesterol, and LDL were higher in the SCH group than the control group. However, there was no significant difference between the two groups for HDL level. Likewise, no difference was observed for the serum level of hs-CRP. PLA2-IIA mean value was higher in the SCH group.

Conclusions:

SCH is associated with increased level of PLA2-IIA, which is independent of BMI. The stronger association of SCH with PLA2-IIA than with hs-CRP indicates that PLA2-IIA is an inducer of inflammation while hs-CRP is not.

Keywords: Hypothyroidism, Group II Phospholipases A2, Lipids, C-Reactive Protein